

JOINT INVESTIGATION REPORT

INCIDENT NO: 2890351 JIV report S/N: 0000792

(Note: As practicable as possible the JIV report is to be signed in the field by all the participating parties)

A. GENERAL INFORMATION:

1. Fountain Incident Number: 2890351 2. Type of incident* OIL SPILL
3. Name of Location 6" SEIBOU BULKLINE
4. Name of nearest community TUBUBOU 5. State: BAYELSA 6. LGA EKEREMOR
7. Production Facility/Installation OIL BULKLINE
8. Asset Owner/Hub THE SHELL PETROLEUM DEVELOPMENT COMPANY OF NIGERIA LIMITED (SPOC)/SWAMP WEST

B. INCIDENT INFORMATION:

9. Details of incident
a. Date Reported: 18TH MARCH, 2021
b. Start date/time of Investigation: 29TH JUNE, 2021 / 1330HRS
c. Investigation End date: 29TH JUNE, 2021 Day(s) on site: ONE(1) DAY
d. Description of spill point environment
☐ Firm soil ☐ Loose soil ☐ Recently excavated area
☐ Under water ☒ Swampy ☐ Exposed pipe surface
☐ Well Platform (on water) ☐ Drill Rig ☐ Sand bag(s)

Additional observations around the spill point:

NOT APPLICABLE

e. Description of leak point (tick as applicable);

<input type="checkbox"/> Smooth round-edge hole	<input type="checkbox"/> Rough-edge hole	<input checked="" type="checkbox"/> Hack saw cut
<input type="checkbox"/> Complete Rupture	<input type="checkbox"/> Inward dent,	<input type="checkbox"/> Well head tampering
<input type="checkbox"/> Failed Weld-on illegal hot tap valve	<input type="checkbox"/> Failed Clamp,	<input type="checkbox"/> Missing Pipeline/Flowline
<input type="checkbox"/> Crude oil theft (illegal bunkering) point,	<input type="checkbox"/> Saver-pit over flow	<input type="checkbox"/> Third party tampering with Clamp
<input type="checkbox"/> Third party tampering with valve setting	<input type="checkbox"/> Bulging Outward	<input type="checkbox"/> Third party tampering with flange,
<input type="checkbox"/> Flare System/Bund wall failure	<input type="checkbox"/> Cold vent	<input type="checkbox"/> Surge vessel overflow,
<input type="checkbox"/> Valve Failure	<input type="checkbox"/> Relief valve failure	<input type="checkbox"/> Accidental 3 rd party equipment impact
<input type="checkbox"/> Tear (_____)		
<input type="checkbox"/> Others (specify) _____		

f. Incident caused by:

☒ Third party interference (Sabotage ☒; crude theft ☐; Line theft ☐; Accidental 3rd party damage ☐
☐ Operational ☐ Others (including Mystery spills) _____

*This can be: (a) Oil Spill (b) Drilling fluid/Chemical (c) Siltation (d) Water Leak (e) Fire (f) Non-leaking theft point removal

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g. Spill Point Coordinates (*Incidents $\leq 100m$ apart to be aggregated into one Joint Investigation Report)

h. Measuring unit

WGS 84

Northings:	Easting:
<u>LATITUDE</u>	<u>LONGITUDE</u>
<u>4.83975</u>	<u>5.90435</u>
<u>/</u>	<u>/</u>

C. RISK ASSESSMENT

10. Details of Environment

i. Type of environment where spill occurred (select one):

☐ Land ☒ Swamp ☐ Water ☐ Seasonal swamp ☐ Shoreline/Waterfront

ii. Type of environment to which oil has spread:

☐ Land ☒ Swamp ☐ Waterbody (specify) _____

iii. Weather condition

☒ Dry ☐ Wet ☐ Windy ☐ Hot

11. Distance to Sensitive habitat within 100m radius

☐ Government reserved and designated protected area [,m]
☐ Drinking water source [,m]
☐ Surface water ☐ Borehole
☐ Built up Area [,m]
☐ Residential Area ☐ Commercial/Industrial Area
☐ Farmlands [,m]
☐ Fish Farm/Pond [,m]
☐ Fishing net [,m]
☐ Others (specify) _____ [,m]

NONE SEEN
WITHIN
VICINITY

12. Containment measures put in place:

☐ Booms ☐ Trench ☐ Dyke ☐ Pit ☐ Natural depression ☒ None

☐ Others: _____

13. Any pictures or video coverage?

☒ [Y] ☐ [N]

14. Further response/repair initiated as at the time of JIV?

☐ [Y] ☒ [N]

If yes to item 14, give brief description:

NOT APPLICABLE

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15. Was there any disruption to the investigation? [Y] [☒N]

If yes to item 15 give brief description:

NOT APPLICABLE

16. Was JIV delayed? [☒Y] [N]

Reason(s):

- ☐ Delayed Community Access Approval ☒ Security Challenges ☒ Access constraint due to terrain
☐ Others (specify) _____

D. TYPE/NUMBERS OF PROPERTIES, IF ANY, FOUND WITHIN THE AREA OF SPREAD OF OIL

17. Structures / Properties

S/N	Type of Structures	Description	Size	Number	Comments
<u>NONE WITHIN AREA OF IMPACT</u>					

18. Crops/Economic Trees

S/N	Type of crops	Young	Medium	Matured	Quantity	Comments
<u>NONE WITHIN AREA OF IMPACT</u>						

19. Fish/Nets/Ponds

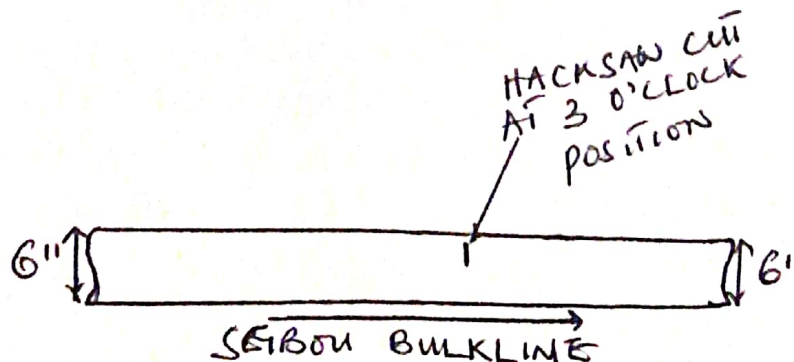
S/N	Fish/Nets/Ponds	Description	Quantity/Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>				

20. Others (Specify) e.g. Animal Traps

S/N	Others	Description	Quantity/Size	Comments
<u>NONE WITHIN AREA OF IMPACT</u>				

E. GRAPHIC DESCRIPTION OF LEAK POINT (while detailed description of the leak point should be contained in the leak report, overview sketch of the site should be added as appendix 1)

A SECTION OF 6" SEIBOU BULKLINE AT TUBUBOU SHOWING A HACKSAW CUT AT 3 O'CLOCK POSITION DONE BY UNKNOWN PERSONS.



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F: TABLE SHOWING SOME OF COORDINATES TAKEN DURING JIV FOR AREA CALCULATION

21. Impacted area boundary Coordinates (If more, Print and attach as Appendix)

S/N	Northing	Easting
1	4.83817	5.9060
2	4.83908	5.9050
3	4.83956	5.90447
4	4.83971	5.90429
5	4.83984	5.90421
6	4.83993	5.90410
7	4.84014	5.90388
8	4.84034	5.90392
9	4.84006	5.90421
10	4.83998	5.90435
11	4.83974	5.90464
12	4.83926	5.90507
13	4.83825	5.90622

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G. INCIDENT INFORMATION:

a. Impacted Area Details *

- Total calculated area of impact (Ha) 0.73 Ha
- Impact within SPDC R.O.W YES
- Impact outside SPDC R.O.W YES

* Round off to 2 decimal places if area is $\geq 100 \text{ m}^2$ or to 4 decimal places if area is $< 100 \text{ m}^2$ (e.g. 14.55, 0.0051, 0.0009)
* Express in Hectares (Ha)

b. Volume of oil recovered before completion of JIV (V_{rec}):

Recovered oil V_{rec} :	<u>NIL</u>	Barrels
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Controlled recovery/evacuation from source with no impact to environment:

<u>NIL</u>	Barrels
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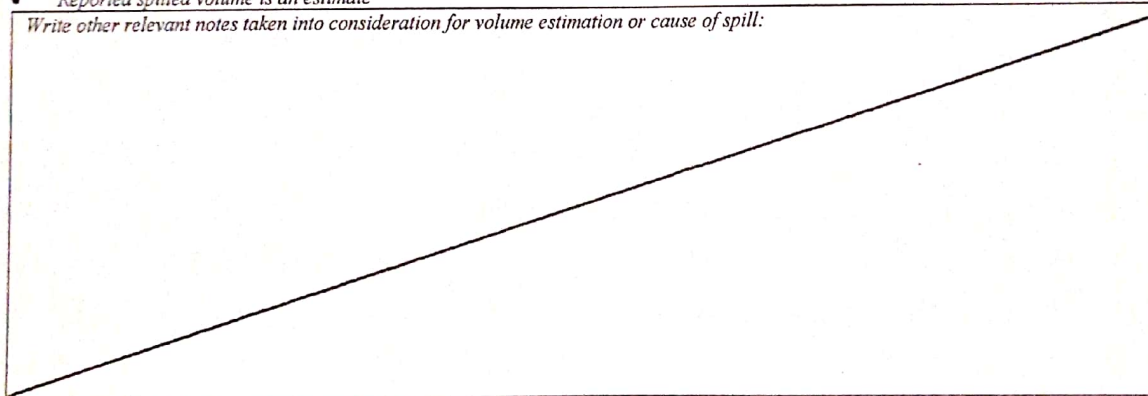
c. Net Estimated Spilled Volume $V_{\text{Est}}(\text{bbls})^* =$ 5.83 BARRELS

Estimated Reported Volume** $V_{\text{rep}}(\text{bbls}) =$ 6 BARRELS

*Notes:

- Volume estimation was done using an excel based tool.(see attached for details on the calculation)
- Reported spilled volume is an estimate

Write other relevant notes taken into consideration for volume estimation or cause of spill:



Calculation of the respective estimated volume is to be done on site as far as practicable using the new spill volume estimation software on site:
Conversion of m^3 to barrels is Volume (m^3) \times 6.29; **Round up estimated volume to next whole number using the following rules:

- Any spill volume in excess of 1 bbl is rounded up to the next whole number.
- Any spill volume in less than 1 bbl is rounded up to the next 0.1 bbl.

Examples: Calculated volume = 15.3 bbl ----- Reported volume = 16 bbl
Calculated volume = 0.35 bbl ----- Reported volume = 0.4 bbl
Calculated volume = 0.01 bbl ----- Reported volume = 0.1 bbl.

Wherever this estimation tool is not applicable please refer to paragraph 6c (Deviations) of the JIV procedure to use appropriate steps for column estimation; record the calculation in a plain sheet of paper and attach to the JIV report.

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d. General Status of the site

- | |
|--|
| i. Joint investigation of the incident site found that there is no residual impact after the initial response and JIT therefore recommend that the site be closed out <input type="checkbox"/> |
| ii. Investigation of the incident site showed that there is residual impact on site requiring further works <input checked="" type="checkbox"/> |

e. Representatives

This report was filled, agreed and signed by the following joint investigation team representatives:

- Host Community: ☒
- Department of Petroleum Resources [DPR]: ☒
- National Oil Spill Detection and Response Agency [NOSDRA]: ☒
- State Ministry of Environment [SME]: ☒
- The Shell Petroleum Development Company [SPDC]: ☒
- *Separate DPR form has been filled out with same findings* ☒
- *Separate NOSDRA form has been filled out with same findings* ☒
- *Separate SME form has been filled out with same findings* ☒

Tick as applicable

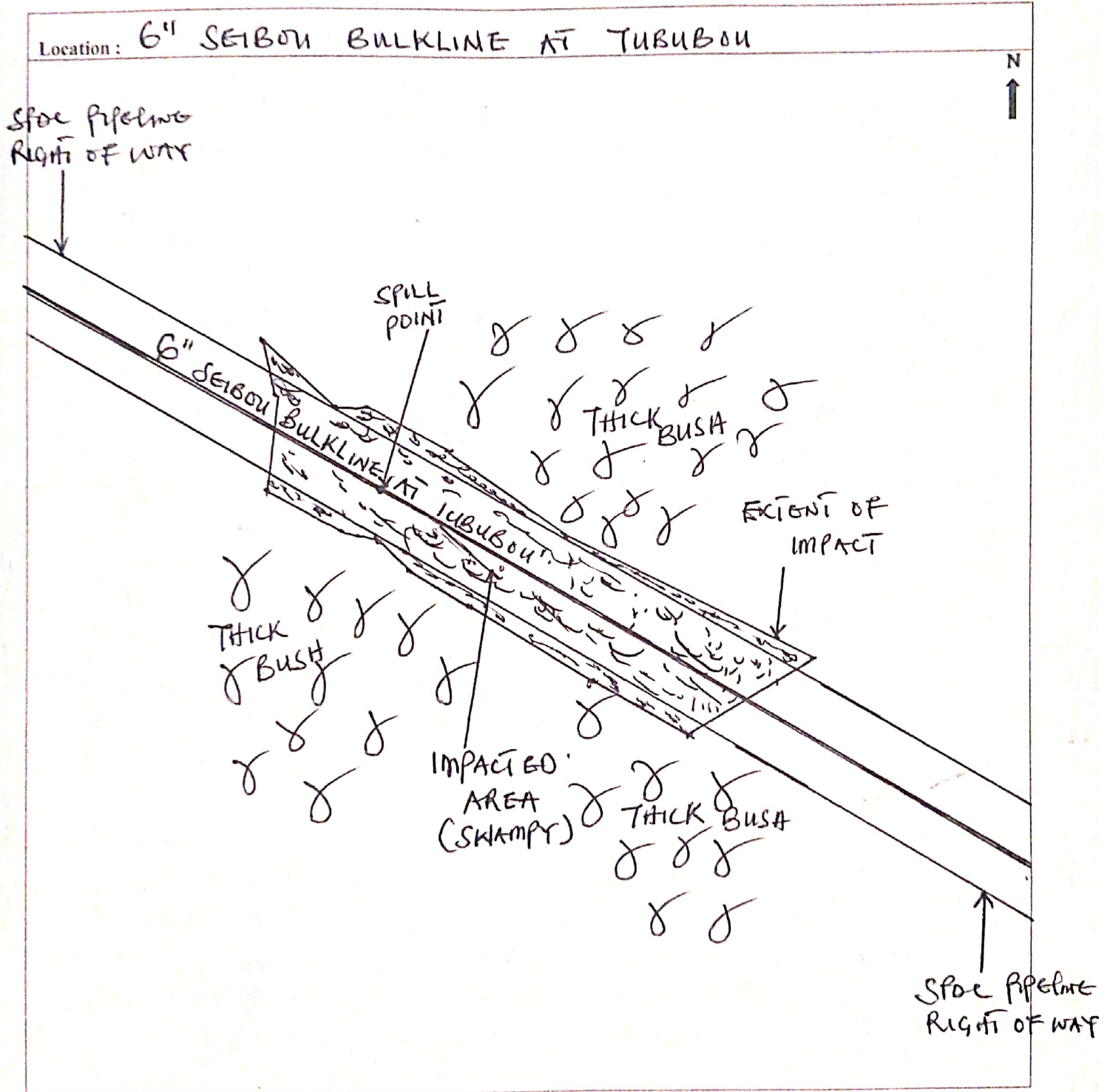
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f. Appendix 1: Overview sketch of the site



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